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SUMMARY SPECIFICATION

| Model Number | Input Voltage | Output Voltage | Setting Range | Output Current | Current Limit | Cooling | Dimensions |
|--------------|---------------|----------------|---------------|----------------|---------------|------------|-----------------------------------------------|
| TDC1500B27 | 45 – 72V d.c. | 27.8V | 26.8 – 28.8V | 0 – 50A | 50 – 52A | Convection | 245 x 147 x 450 mm 9.65 x 5.79 x 17.72 in. |

INPUT SPECIFICATION

Voltage 45 – 72V d.c.
 Efficiency Greater than 85% for output loads in excess of 50% I_{MAX} . Typically 88%.

OUTPUT SPECIFICATION

Voltage The output voltage is factory set to the voltage shown in the summary specification. The output voltage is adjustable over the range shown in the summary specification.

Current Continuous output current is available up to the current limit point. For test purposes, measurements are made at the maximum rated output current, I_{MAX} .

Combined Regulation A worst case combination of input voltage variation of 45V to 72V and output load variation between zero and I_{MAX} results in an output voltage change of less than 0.2% nominal.

Ripple and Noise The wideband differential output noise over the frequency range 10Hz–100MHz does not exceed 50mV r.m.s. individual harmonics do not exceed 2mV r.m.s. (typically 200µV). The psophometrically weighted noise, in accordance with C.C.I.T.T. No 1, does not exceed 2mV r.m.s.

PROTECTION

Output Current Limit These rectifiers are designed to be able to operate continuously in current limit and are fully protected against output overload.

Output Overvoltage An output voltage in excess of the trip point of 31.25V will cause the rectifier to latch into a shutdown condition. The rectifier is reset by interrupting the input.

Thermal Overload A thermal sensor is fitted to the main heatsink which, under thermal overload conditions, will cause the unit to inhibit until the temperature has reduced to an acceptable level.

AUXILIARY FUNCTIONS

| | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Remote Sense | Available as an option. |
| Parallel Operation | Units may be operated with outputs connected in parallel without limitation. Passive or active current sharing can be used. |
| Remote On/Off | An isolated TTL input is provided to allow for remote switching of the rectifier. |
| Voltage Trim | A facility to allow external adjustment of the output voltage to suit battery environment. |
| Output Healthy Relay | Isolated changeover relay contacts indicating that the output voltage is within the normal operating range. |
| Current Signal | Analogue output with a voltage proportional to output current. |
| Input Healthy | Isolated open collector output and LED indicating that the mains input is within specification. |
| Output Healthy | Isolated open collector output and LED indicating that the output voltage is within normal operating limits. |
| Current Limit | Isolated open collector output and LED indicating that the current limit circuitry is operative. |
| Overvoltage Trip | Isolated open collector output and LED indicating that the units overvoltage trip has operated. |

ELECTRICAL ISOLATION

| | |
|-----------------|------------------------------------------------------------------------------|
| Input to Earth | Input is floating with respect to earth. 200V d.c. maximum working voltage. |
| Output to Earth | Output is floating with respect to earth. 200V d.c. maximum working voltage. |
| Input to Output | Insulated to 1kV a.c. r.m.s. for one minute. |

ELECTROMAGNETIC COMPATIBILITY

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|----------------|------------------------------------------------------------------------------------------|
| Exported Noise | Units have been tested to and found to comply with the requirements of VDE 0878 Curve A. |
|----------------|------------------------------------------------------------------------------------------|

MECHANICAL SPECIFICATION

| | |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical Format | Units are fully enclosed and are intended for rack mounting. |
| Mounting Orientation | The units are designed to operate with the front panel and the cooling fins vertical. |
| Ventilation and Cooling | Units require vertical air flow for cooling. Both top and bottom faces are ventilated and the left hand side of the unit is fitted with a heatsink. The top and bottom of the units are ventilated and must not be obstructed. |

ENVIRONMENTAL CONDITIONS

| | |
|-----------------------|-------------------------------|
| Operating Temperature | -10°C to +50°C operating. |
| Operating Humidity | 0 to 85% R.H. non-condensing. |

INTERNATIONAL SAFETY APPROVALS

Units as detailed below have been tested by the following approval bodies to the standards listed and have been approved as being compliant with those standards or with the relevant sections of those standards.

CE marked to the Low Voltage Directive

For more detailed information on these units please contact your local sales office or agent.

ORDERING INFORMATION

To order specify the model number. If any optional features are required it is advisable to contact your local sales office or agent in the first instance. Optional features must be clearly shown on the order. Connector kits may also be ordered from Advance Power, see connector information for details.

OUTLINE DRAWING

All dimensions are nominal and are given in mm (inches).

External Dimensions and Mass

245 (9.65) high with 266 (10.47) front panel x 147 (5.79) wide x 450 (17.72) deep.

Fixings 6.5 mm diameter clear hole is provided on the front panel.

Connectors The following connectors are required for connection to the rectifier:

Input Anderson SB50 #6. Available as connector kit 1TKP50A01

Output and Signals Golden "D" connector "C" shell size, 21WA4 female connector with four power receptacles. Available as connector kit 1TKD21W02.

